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EPA Unveils Test Methods For Fracking Study, Raising New Policy Doubts

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EPA has unveiled new academic papers detailing novel water testing methods to detect contaminants linked to hydraulic fracturing as part of its pending study on whether the process adversely impacts drinking water, but advocates say the studies fail to resolve questions about the fate of the assessment and the agency's fracking policies.

Environmentalists say the agency is yet to disclose any information about how the new methods being developed as part of the study could be used by EPA, states, or industry to improve drinking water protection. "They're not talking about how it could be applied," one environmentalist says, adding that "We certainly need good science, but without applying it and coming to conclusions" its utility may be limited to "just an academic exercise."

Environmentalists say they are also concerned because EPA seems to have stepped back from some of its efforts earlier during the Obama administration to tighten oversight for oil and gas development.

Although advocates want EPA to pursue new rules to address what they say are water contamination risks from fracking, the agency is first pursuing the study mandated by a 2010 appropriations law. EPA's Office of Research and Development and Office of Water jointly launched the effort in 2011, consisting of a series of research projects and retrospective case studies aimed at examining actual fracking operations for potential impacts, literature reviews, toxicity assessments and scenario evaluations for the stages of the water lifecycle of fracking.

As part of the study, EPA Aug. 11 released the two new papers, "The Verification of a Method for Detecting and Quantifying Diethylene Glycol, Triethylene Glycol, 2 Butoxyethanol and 2 Methoxyethanol in Ground and Surface Waters" and "Development of Rapid Radiochemical Method for Gross Alpha and Gross Beta Activity Concentration in Flowback and Produced Waters from Hydraulic Fracturing Operations," detailing methodologies for testing water.

The verification paper details a testing methodology for determining the effectiveness of a draft plan developed by EPA Region III for identifying glycols, substances often used in fracking fluids, in drinking waters where contamination may have occurred. The paper, which examined tests of the procedure at a handful of EPA, state, municipal and private labs across the country, concluded that the testing method is "accurate and precise," when the levels of glycols were high enough to be detectable, though it says "a few statistical outliers were identified."

The radiochemical paper details a new methodology to screen water samples from fracking sites for the presence of naturally occurring radioactive material -- contaminants often of concern in fracking wastewater, which is comprised of the fracking fluids brought up during the operation and deep formation brine and other natural contaminants.

Research Projects

"The new methods will allow for more accurate assessments of radioactivity in water samples," EPA says of the two papers. The papers are individual research projects intended to support EPA's study, draft findings of which are expected to be released later this year, but environmentalists and others say that the agency has been largely quiet on how the rest of the study -- which includes a set of retrospective contamination case studies -- is progressing.

"It's been quiet," a member of the Science Advisory Board (SAB) panel tasked with reviewing EPA's November 2011

study plan, a "progress report" released in December 2012, and the draft report when it is complete, says, adding that the panel thought EPA might schedule a briefing over the summer but has not yet heard anything.

But some members of the SAB panel did attend some roundtable discussions EPA has held around the country earlier this year to discuss some technical aspects of the study, the source says.

And an EPA spokeswoman says, "In July, EPA met with state technical experts to exchange information related to EPA's research on hydraulic fracturing well construction techniques and practices as it relates to the study," and that the agency is planning another roundtable in fall of this year.

Nevertheless, the environmentalist says that they remain "very concerned" about the progress of the study, given that since launching the study, EPA has backed off groundwater investigations in Pennsylvania, Wyoming and Texas where oil and gas development was reportedly linked to contamination. The source adds that there has been "dead silence" on the set of retrospective studies EPA is conducting -- essentially groundwater studies in areas where water pollution has already occurred -- considered to be the core of the overall study.

Environmentalists say their concerns are heightened by what they claim is EPA stepping back from a previously more aggressive approach to oversight of oil and gas operations, in particular over fracking.

EPA Administrator Lisa Jackson appeared to urge a stronger oversight role for the agency on the sector, with EPA undertaking enforcement action in Parker County, TX in 2010 which the agency later dropped, under the Safe Drinking Water Act (SDWA), and conducting a review of existing EPA authority to oversee the industry.

EPA 'Backpedaling'

But EPA seems to be "backpedaling" on some actions it took earlier in the administration, a second environmentalist says, pointing out that the agency has pulled back from its efforts not only in Texas, withdrawing a SDWA order it had issued to Range Resources for suspected contamination after the company mounted a constitutional challenge, but also in Wyoming and Pennsylvania.

The agency pulled back on its investigations under its Superfund authority in Dimock Township, PA, and in Pavillion, WY, turning the issues instead over to the state agencies in both cases without issuing any final conclusions.

And there have been no recent updates on EPA's efforts to secure plans to conduct "prospective" case studies examining the effect of new drilling operations, sources say. The studies are expected to provide a baseline for tracking fracking's impacts on drinking water as natural gas development begins and progresses at a site.

EPA has struggled to orchestrate the prospective studies with individual energy companies, and has been hindered by difficulties in identifying appropriate sites, liability concerns and timing elements -- raising concerns that it may be difficult to draw firm conclusions about fracking's overall effects on drinking water from the study without sound baseline data. But EPA says it intends to complete the prospective studies as a supplement to the final study.

The SAB panel is awaiting release of the draft report in December, the panel member says, adding that there has been no indication that it could be delayed, but has not received a formal update on the study since a Nov. 20, 2013 briefing to review "New and Emerging Information Related to hydraulic Fracturing."

At that briefing, panelists raised concerns that the study may be taking too narrow of an approach and could ignore issues such as drinking water well construction and water availability.

For example, panel member Daniel Goode of U.S. Geological Survey said during the call, "The concern is in terms of the whole lifecycle of drinking water -- it is important to keep focus on that and not limit ourselves to what's happening 300 feet down." -- *Bridget DiCosmo* (bdicosmo@iwpnews.com) This e-mail address is being protected from spambots. You need JavaScript enabled to view it)